

SNC Reference Number (enter if previously assigned)
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PROJECT SUMMARY

County: Sacramento

Applicant: California Association of Resource Conservation Districts

Project Title: Quantifying Sediment Delivery from Native Roads, Diversion Ditches, and Mines within the Yuba, Bear, American and Consumnes River Watersheds to Identify and Prioritize Future Restoration Projects

PROJECT GOAL

This primary goal of this project is to perform an up front, project-scale planning analysis to minimize future restoration costs by maximizing benefits through the identification and prioritization of future restoration projects to reduce sediment delivery to surface waters from primary sediment sources within the Yuba, Bear, American, and Consumnes River watersheds. This will be accomplished by conducting recommended and necessary field studies in combination with predictive erosion modeling at the project-scale to quantify sediment delivery from primary sediment sources (native roads, erodible diversion ditches, and abandoned mines) within the four watersheds. Modeling results will provide information for the identification and prioritization of future restoration projects. A secondary goal is to fill a significant data gap with regards to instream suspended sediment quantity and quality. To accomplish this, suspended sediment concentrations and flow rates will be measured per a sampling design that will provide the necessary data to calculate estimates of natural and anthropogenic suspended sediment loads, and to estimate mercury contamination in suspended sediments.

PROJECT SCOPE

Sediment delivery from native roads, erodible diversion ditches, and abandoned mines will be quantified in several steps over a two-year period through a combination of GIS analysis, detailed GPS field surveys, and predictive erosion modeling using the Water Erosion Prediction Project (WEPP) model. A detailed, two-year field-level GPS survey of native roads, erodible diversion ditches, and abandoned mines that are within priority subwatersheds and hydrologically connected to perennial and ephemeral channels will be conducted to collect attribute data needed to apply the WEPP model. The WEPP model will then be applied using the GPS data in combination with existing WEPP datasets to predict annual average sediment delivery rates to surface waters. Results will be used to identify and prioritize future restoration projects. Suspended sediment quantity and quality will be investigated by measuring flow and sampling total suspended solids (TSS) at two locations each within 18 subwatersheds using a top-down approach in an effort to calculate both natural and anthropogenic suspended sediment loads and to estimate mercury contamination of suspended sediments.

LETTERS OF SUPPORT

Letter of support have been provided by Mr. Mark Egbert on behalf of the Georgetown RCD and El Dorado County RCD; Mr. Richard Gresham on behalf of the Placer County RCD; and Ms. Lesa Osterholm on behalf of the Nevada County RCD.

SNC PROJECT DELIVERABLES AND SCHEDULE

DETAILED PROJECT DELIVERABLES	TIMELINE
INCLUDE SPECIFIC TASKS IDENTIFIED IN SCOPE AND ALL REPORTS, ETC.	ASSUME START DATE 60 DAYS AFTER SNC BOARD AUTHORIZATION
Quality Assurance Project Plan approval	Feb - Apr 09
GPS field survey Year 1	Jun - Aug 09
WEPP Modeling Year 1	Oct - Nov 09
GPS field survey Year 2	Jun - Aug 10
WEPP Modeling Year 2	Oct - Nov 10
Quarterly and storm event sampling Years 1 and 2	Apr 09 - Jan 11
Technical Report	Nov 10 - Feb 11

SNC PROJECT COSTS

PROJECT BUDGET CATEGORIES	TOTAL SNC FUNDING
INCLUDE COSTS FOR STAFF, TASKS, DELIVERABLES AND PROJECT PERFORMANCE MEASURES	\$395500
Labor	\$207100
Equipment	\$30200
Travel	\$13000
Lab Analyses	\$93600
Project Administration	\$51600
	\$
	\$
	\$
	\$
SNC GRANT TOTAL	\$395,500